AMENDMENTS TO THE DRAWINGS

A replacement drawing for FIGURE 6 is attached herewith. Replacement FIGURE 6 is designated by a legend, "Prior Art," as requested by the Examiner.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

REMARKS

This amendment is responsive to the Office Action mailed March 30, 2005.

In the Office Action, Claims 1-9 were rejected under 35 U.S.C. § 102(e) as anticipated by Ohta et al. (U.S. Patent No. 6,246,649). Applicant traverses the rejection of the claims and submits the following. In this regard, prior to discussing why the claims of the present application, some of which have been amended to more specifically recite the subject matter that applicant considers as his invention, are allowable, a brief description of an embodiment of the present invention and the cited and applied prior art is set forth. It should be understood that the following is provided to merely assist the Examiner's understanding of the present application, and is not intended to limit the scope of the claims.

In accordance with one embodiment of the present invention, in order to detect a center frequency of a wobble signal, it is proposed to use a first band-pass filter to detect an approximately center frequency, followed by setting the center frequency of a second band-pass filter to the center frequency that was detected by the first filter. As described in the specification as filed, while referring to Figure 3:

> The wobble signal reproducing section 18 of the illustrated embodiment further has two frequency-controlled band-pass filters (BPFs) 18f, 18k disposed behind the differentiator 18e.... The first BPF 18f has a pass band so set by a frequency signal from a reference frequency generator 18g as to allow the wobble signal to pass through the first BPF 18f at any position on the optical disk being driven under the CAV control.... Due to such broader pass band of the first BPF 18f, a signal from the first BPF 18f contains not only a wobble signal but also noises with frequencies near the frequency of wobble signal....
>
> The signal from the first BPF 18f is supplied to a comparator 18h and a frequency detector 18i. By the comparator 18h and frequency detector 18i, the zero point and the cycle of the frequency of the signal that has passed through the first BPF 18f are detected to thereby detect approximately the center frequency of the wobble signal. The detected frequency of the wobble signal is output to ... a frequency converter 18j....

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

> The second BPF 18k, as opposed to the first BPF, is a filter having a narrow pass band. By the control signal supplied from the frequency converter 18j, the center frequency (filtering center frequency) for the second BPF 18k is set to be the frequency, i.e., the center frequency of the wobble signal, that has been detected through the first BPF 18f, comparator 18h and frequency detector 18i. With the center frequency thus set, the second BPF 18k extracts the wobble signal only from the output of the differentiator 18e.
>
> (Specification, page 12, line 15-page 14, line 3.)

Thus, in accordance with one aspect of the present invention and as recited in amended Claim 1, wobble signal reproducing means of an optical disk device includes "detection means for detecting a center frequency of a wobble signal" comprising: "(i) a band-pass filter having a pass band being set to pass the wobble signal within a range of driving in rotation of the optical disk by said drive means," and "(ii) a frequency detection means for *detecting a frequency of the wobble signal which has passed through said band-pass filter*". (Emphasis added.) The wobble signal reproducing means further includes "extracting means for extracting the wobble signal from the output electric signal *on the basis of the frequency detected by said frequency detection means*." (Emphasis added.) In short, the frequency detected by the frequency detection means as having passed through the band-pass filter, is used as a basis for extracting a wobble signal. (In one embodiment illustrated in detail above, the frequency detected by the frequency detection means as having passed through the band-pass filter is used to set the center frequency of a second band-pass filter.)

This aspect of the invention, now explicitly recited in amended Claim 1, is not taught or suggested by Ohta. The Office Action appears to indicate that Ohta's BAND-PASS FILTER 51 in Figure 4 may correspond to the "band-pass filter" of the present application. Even so, Ohta does not at all teach or suggest the use of "a frequency detection means for *detecting a frequency of the wobble signal which has passed through said band-pass filter*" nor "extracting means for

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

extracting the wobble signal from the output electric signal *on the basis of the frequency detected by said frequency detection means*." (Emphasis added.)

In particular, referring to its Figure 4, Ohta describes its ATP DEMODULATOR 20, including a BAND-PASS FILTER 51, an FM demodulating PLL (phased locked loop) circuit 53, and a LOW-PASS FILTER 54, each of which receives the SET FREQUENCY SIGNAL from the CONTROL MICROCOMPUTER 21, as shown. Specifically, "[t]he low-and high-band cut-off frequencies of the band-pass filter 51 are set with the set frequency signal supplied from the control microcomputer 21" (Col. 7, lines 2-4), "[a] frequency that is the center of the frequency variation [in the FM demodulating PLL circuit 53] is set with the set frequency signal supplied from the control microcomputer 21" (Col. 7, lines 21-24), and "[t]he cut-off frequency of the low-pass filter 54 is set with the set frequency signal supplied from the control microcomputer 21" (Col. 7, lines 31-33). Thus, in Ohta, each of the BAND-PASS FILTER 51, FM demodulating PLL circuit 53, and LOW-PASS FILTER 54 receives the SET FREQUENCY SIGNAL from the CONTROL MICROCOMPUTER 21. As such, Ohta does not at all teach or suggest "detecting a frequency of the wobble signal which has passed through" the BAND-PASS FILTER 51 nor "extracting the wobble signal from the output electric signal on the basis of the frequency detected" as having passed through the BAND-PASS FILTER 51, let alone "extracting the wobble signal from the output electric signal" by using the frequency detected as having passed through the BAND-PASS FILTER 51 to set the center frequency of the LOW-PASS FILTER 54 (rather, in Ohta, the center frequency of the LOW-PASS FILTER 54 is pre-set as the SET FREQUENCY SIGNAL received from the CONTROL MICROCOMPUTER 21, as shown in Figure 4.)

Accordingly, it is respectfully submitted that Claim 1, as amended, is allowable over Ohta.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claims 2-3, 5-6, and 8-9 have been canceled. The remaining Claims 4 and 7 both depend from amended Claim 1, and as such both are believed to be allowable for at least the same reasons why amended Claim 1 is allowable.

Based on the foregoing, the present application, including Claims 1, 4, and 7, as amended, is believed to be in condition for allowance. An early and favorable action passing the present application for issuance as a patent is respectfully requested. If the Examiner should have any further issues to resolve, he is requested to telephone applicant's undersigned attorney at the number set forth below.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS[PLLC]

Shoko I. Leek
Registration No. 43,746
Direct Dial No. 206.695.1780

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date: June 30, 2005 Victoria Sellers

SIL:pww

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS[PLLC]
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100